CLAIMS

1. A system for supplying a lubricant to a pair of disc rolls of a piercing mill, comprising:

a storage tank of the lubricant;

a plumbing extended from the storage tank to a position near the disk rolls;

a spray nozzle provided at the tip of the plumbing;

a device for switching flow direction provided in some midpoint of the plumbing;

a plumbing extending from the device for switching flow direction to the storage tank; and

a device for releasing pressure in the plumbing, provided between the switching device and the spray nozzle.

2. The system for supplying the lubricant according to claim 1, further comprising a flow controller for controlling flow rate of the lubricant in each plumbing directly connected to the spray nozzle.

3. The system for supplying the lubricant according to claim 1 or 2, wherein the spray nozzle is configured so as to be flexibly directed toward the guide faces of the disc rolls in accordance with change in a size or a position of the disc rolls.

4. The system for supplying the lubricant according to claim 1, further comprising a cleaning device for the plumbing.

5. The system for supplying the lubricant according to claim 1, further comprising a device for supplying a solidifier for solidifying the lubricant.

6. An apparatus for manufacturing a seamless pipes or tubes, comprising:

a rolling mill including a plug oriented in a piercing direction, a pair of disc rolls disposed on both sides of an axis of the plug in a first plane including the axis, and a pair of main rolls disposed on both sides of the axis with a predetermined inclination to a second plane including the axis and orthogonal to the first plane; and

a system for supplying a lubricant including a storage tank of the lubricant to be supplied to the disc rolls, a plumbing extending from the storage tank to a position near the disk rolls, a spray nozzle provided at the tip of the plumbing, a device for switching flow direction provided in some midpoint of the plumbing, a plumbing extending from the device for switching flow direction to the storage tank, and a device for releasing pressure in the plumbing, provided between the device for switching flow direction and a spray port to the disc rolls of the plumbing.

7. The apparatus for manufacturing seamless pipes or tubes according to claim 6, further comprising:

a multiaxial arm to which the spray nozzle is attached and which can change a spraying direction of the spray nozzle;

and

a unit for moving the multiaxial arm forward/backward to/from the rolling mill.

8. A method of manufacturing seamless pipes or tubes by using a piercing mill having a pair of disc rolls while supplying a lubricant to the disc rolls, comprising:

supplying the lubricant to the disc rolls during piercing ;

circulating the lubricant in a plumbing when piercing is not performed; and

releasing pressure of the lubricant in the plumbing near a spraying port to the disc rolls.

9. The method of manufacturing seamless pipes or tubes according to claim 8, wherein the lubricant is sprayed toward a guide face at angles within five degrees from a center plane which is parallel to the side of the disc rolls and passes the center in the width direction of the guide face.

10. The method of manufacturing seamless pipes or tubes according to claim 8, wherein the lubricant is sprayed from the inlet side of a piercing mill.

11. Seamless pipes or tubes manufactured by a manufacturing method according to any one of claims 8 to 10.